

CLAIMS

1. Machine tool transmission, in particular a spindle transmission, in which the force and/or torque transfer from the output shaft (3) of the transmission (1) takes place directly to the spindle (15), whereby the spindle (15) is placed co-axial with the output shaft (3), characterized in that a sealed rotary feed-through is integrated into the transmission (1), which serves as a transfer device for the flow of cooling fluids, oil or air between the transmission output shaft and the spindle (15).
2. Machine tool transmission designed according to patent claim 1, characterized in that the sealed rotary feed-through is mounted in the output shaft (3) of the transmission (1) that includes a gasket on the engine side (16) and a spindle side gasket (17).
3. Machine tool transmission designed according to patent claim 2, characterized in that the gasket on the engine side (16) is connected by a tube (18) and by some construction elements of the transmission to the drive shaft (2), and that the spindle side gasket (17) is placed directly over the spindle (15) or over additional connection parts.
4. Machine tool transmission designed according to patent claim 3, characterized in that in case that the transmission includes a planetary gear, the gasket on the engine side (16) is connected by a tube (18), the sun gear (4) and a hub (19) to the drive shaft (2).
5. Machine tool transmission designed according to one of the preceding patent claims, characterized in that the sealed rotary feed-through is supported by means of a suspension (20) in a housing, whereby the suspension (20) is formed by ball bearings, roller bearings, friction bearings or hydraulic bearings.
6. Machine tool transmission designed according to one of the preceding patent claims, characterized in that the sealed rotary feed-through includes a check valve (21), which prevents the pipe (18) from running dry and the feeder lines from operating in the absence of pressure.

7. Machine tool transmission designed according to either of the preceding patent claims 2 to 6, characterized in that the sealed rotary feed-through has a spring (22) that holds the gaskets (16, 17) together.

8. Machine tool transmission designed according to either of the preceding patent claims 2 to 7, characterized in that the sealed rotary feed-through has a complementary mechanism which keeps the gaskets (16, 17) apart from each other if there is no medium flow.

9. Machine tool transmission designed according to patent claim 8, characterized in that the additional mechanism is a spring.

10. Machine tool transmission designed according to each of the preceding patent claims, characterized in that the sealed rotary feed-through includes at least one leakage return flow (23) to a tank.